PRELIMINARY SITE ASSESSMENT

NC 268 FROM MULTI-LANES EAST OF NC 18
TO SR 1966 (AIRPORT ROAD)
PARCEL 60 VERNON WYATT
HOLLAND'S USED CARS
703 ELKIN HIGHWAY
WILKESBORO, WILKES COUNTY, NORTH CAROLINA

NCDOT WBS ELEMENT 36001.1.2
STATE PROJECT R-2603

July 12, 2013

Prepared for:

Gordon H. Box, L.G.
North Carolina Department of Transportation
Geotechnical Engineering Unit
GeoEnvironmental Section
1589 Mail Service Center
Raleigh, North Carolina 27699-1589

Prepared by:

Kleinfelder Southeast, Inc.
6200 Harris Technology Blvd.
Charlotte, North Carolina 28269

Kleinfelder Project No. 134245

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July 12, 2013
134245 | CLT13R0320

Gordon H. Box, L.G.
North Carolina Department of Transportation
1589 Mail Service Center
Raleigh, North Carolina 27699-1589

Subject: **Preliminary Site Assessment**
WBS Element No. 36001.1.2, State Project R-2603
Parcel 60 Vernon Wyatt
Holland's Used Cars
703 Elkin Highway
Wilkesboro, North Carolina

Dear Mr. Box:

Please find the enclosed report summarizing the sampling activities for the preliminary site assessment conducted at the referenced site. Field analysis of four soil samples collected at the site did not detect contaminant concentrations exceeding the State action level. This report summarizes our field activities, field analytical report, conclusions, and recommendations.

Should questions arise or additional information be required, please contact the undersigned.

Sincerely,

KLEINFELDER SOUTHEAST, INC.

Travis L. O'Quinn
Staff Professional I

Craig D. Neil, P.G.
Senior Professional

PRELIMINARY SITE ASSESSMENT

Site Name and Location:	Parcel 60 Vernon Wyatt Holland's Used Cars 703 Elkin Highway Wilkesboro, Wilkes County, North Carolina
Latitude and Longitude:	36° 11' 17.35" N, 81° 07' 29.27" W
Facility ID Number:	Not Applicable
NCDOT Project No.:	NCDOT WBS Element 36001.1.2 State Project R-2603
Date of Report:	July 12, 2013
Consultant:	Kleinfelder Southeast, Inc. 6200 Harris Technology Blvd. Charlotte, North Carolina 28269 Attn: Mr. Craig D. Neil Phone: 704.598.1049 X457

Seal and Signature of Certifying Licensed Geologist

I, Craig D. Neil, a Licensed Geologist for Kleinfelder Southeast, Inc., do certify that the information contained in this report is correct and accurate to the best of my knowledge.

July 12, 2013

Craig D. Neil, P.G.
NC License No. 1882

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1.0 INTRODUCTION

Kleinfelder Southeast, Inc. (Kleinfelder) has prepared this Preliminary Site Assessment (PSA) report documenting assessment activities performed at the Parcel 60 Vernon Wyatt property located at 703 Elkin Highway in Wilkesboro, Wilkes County, North Carolina (Figure 1). The site is currently developed with Holland's Used Cars which is a used car dealership. This assessment was conducted on behalf of the North Carolina Department of Transportation (NCDOT) in accordance with Kleinfelder's May 3, 2013 proposal.

NCDOT is proposing to widen NC 268 (Elkin Highway) east of NC 18 to SR 1966 (Airport Road). The proposed right-of-way includes a portion of Parcel 60 (Figure 2). Based on information provided by NCDOT, the site is a used car dealership called Holland's Used Cars that may have formerly operated as a gas station, but there are no known underground storage tanks (USTs). Therefore, there is concern that contaminated soils could be encountered during the construction activities at this site.

The purpose of this assessment was to determine the presence or absence of impacted soil at the subject property in proposed right-of-way construction areas related to the widening of Elkin Highway east of NC 18 to SR 1966 (Airport Road).

1.1 Site Description

The proposed right-of-way includes the construction areas related to the widening of Elkin Highway east of NC 18 to SR 1966. At the time of our site reconnaissance, the site contained an active used car dealership named Holland's Used Cars. Based on information provided by NCDOT, the site is a used car dealership called Holland's Used Cars that may have formerly operated as a gas station, but there are no known USTs. During the field activities the two onsite structures were occupied with a used tire sales and an automotive repair shop. The geophysical investigation did not identify suspect USTs or unidentified anomalies within the proposed right-of-way. However, Kleinfelder did observe what appeared to be a former dispenser island located at the southwestern corner of the automotive repair shop. Site photographs are shown in Appendix A.

1.2 Site Location

The facility is located at 703 Elkin Highway in Wilkesboro, North Carolina. The property is bound to the north and east by wooded land, to the south by Elkin Highway, and to the west by Sidney Avenue.

2.0 SITE ASSESSMENT

2.1 Geophysical Investigation

Pyramid Environmental & Engineering, P.C (Pyramid) conducted a geophysical investigation of the property on May 20, 2013. Pyramid utilized ground penetrating radar (GPR) and electromagnetic (EM) induction technology to locate potential geophysical anomalies and potential USTs at the site. The geophysical investigation did not identify suspect USTs or unidentified anomalies within the proposed right-of-way. A copy of the Pyramid Geophysical Investigation Report is included in Appendix B.

2.2 Soil Sampling

To determine if contaminated soil may be encountered during the proposed construction activities, four soil samples were collected along the NCDOT proposed easement. Prior to conducting soil borings, utilities were marked by NC One Call and Taylor Wiseman & Taylor (TWT). Kleinfelder met Probe Technology at the site on May 30, 2013. Probe Technology advanced four soil borings (SS-1 to SS-4) by direct push technology (DPT). The approximate location of the borings is shown on Figure 3.

Soil borings were advanced to a depth of ten feet below the ground surface (bgs) at each location. Soil borings SS-1 through SS-4 were located on the southern portion of the property and along the proposed easement. Soil samples were collected by driving a macrocore sampler in five foot intervals in each boring. Each five foot sample sleeve was divided in half and screened for volatile organic compounds in the field using a MiniRae 2000 photo-ionization detector (PID). In each boring, the soil interval with the highest PID reading was collected for field analysis. The PID readings are summarized in Table 1. Copies of the boring logs are included in Appendix C.

Prior to the initial boring and after each subsequent boring, the sampling equipment was decontaminated with a pressure washer. The soil samples collected for analysis were analyzed

in the field by a QED for total benzene, toluene, ethylbenzene, and xylenes (BTEX); total petroleum hydrocarbons (TPH); TPH diesel range organics (DRO); TPH gasoline range organics (GRO); total Aromatics (C10-C35); 16 EPA PAHs; and benzo(a)pyrene. All soil samples were placed into laboratory provided containers, labeled, and were analyzed by the QED for chemical analysis.

3.0 RESULTS

3.1 Geophysical Investigation

Pyramid concluded that the GPR and EM investigation did not detect metallic USTs or unidentified anomalies within the survey area. Pyramid's report is included in Appendix B.

3.2 Soil Sampling

Soil samples SB-1 through SB-4 did not detect targeted constituents above the North Carolina action levels (10 mg/kg). The field analytical results are summarized in Table 2. The field analytical report is included in Appendix D.

4.0 CONCLUSIONS AND RECOMMENDATION

Based on results of the field analysis and field observations, Kleinfelder has the following conclusions:

- The GPR and EM investigation did not detect metallic USTs or unidentified anomalies within the survey area.
- Groundwater was not encountered in the soil borings.
- Based upon the QED results, no targeted constituents were detected above the North Carolina action levels.
- No existing groundwater monitoring wells were observed within the survey area.

Based on the results of the laboratory analysis, Kleinfelder does not recommend additional assessment or remediation at the site.

5.0 LIMITATIONS

Our work has been performed in a manner consistent with that level of care and skill ordinarily exercised by other members of Kleinfelder's profession practicing in the same locality, under similar conditions and at the date the services were provided. Our conclusions, opinions and recommendations are based on a limited number of observations and data. It is possible that conditions could vary between or beyond the data evaluated. Kleinfelder makes no guarantee or warranty, express or implied, regarding the services, communication (oral or written), report, opinion, or instrument of service provided.

The information included on graphic representations in the report has been compiled from a variety of sources and is subject to change without notice. Kleinfelder makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness, or rights to the use of such information. These documents are not intended for use as a land survey product, nor are they designed or intended as a construction design document. The use or misuse of the information contained on these graphic representations is at the sole risk of the party using or misusing the information.

TABLES

TABLE 1: SOIL SAMPLE PID RESULTS

SAMPLE LOCATION	DEPTH (feet bgs)	PID READINGS
SS-1	2.0-3.0	2.5
	4.0-5.0	3.5
	7.0-8.0	6.1
	9.0-10.0	5.3
SS-2	2.0-3.0	5.7
	4.0-5.0	6.2
	7.0-8.0	2.0
	9.0-10.0	4.7
SS-3	2.0-3.0	3.3
	4.0-5.0	4.9
	7.0-8.0	5.2
	9.0-10.0	4.6
SS-4	2.0-3.0	1.3
	4.0-5.0	5.8
	7.0-8.0	2.9
	9.0-10.0	1.7

Notes:
Samples were collected on May 30, 2013.
Readings reported in parts per million
feet bgs = feet below ground surface
Shaded = Selected for field analysis

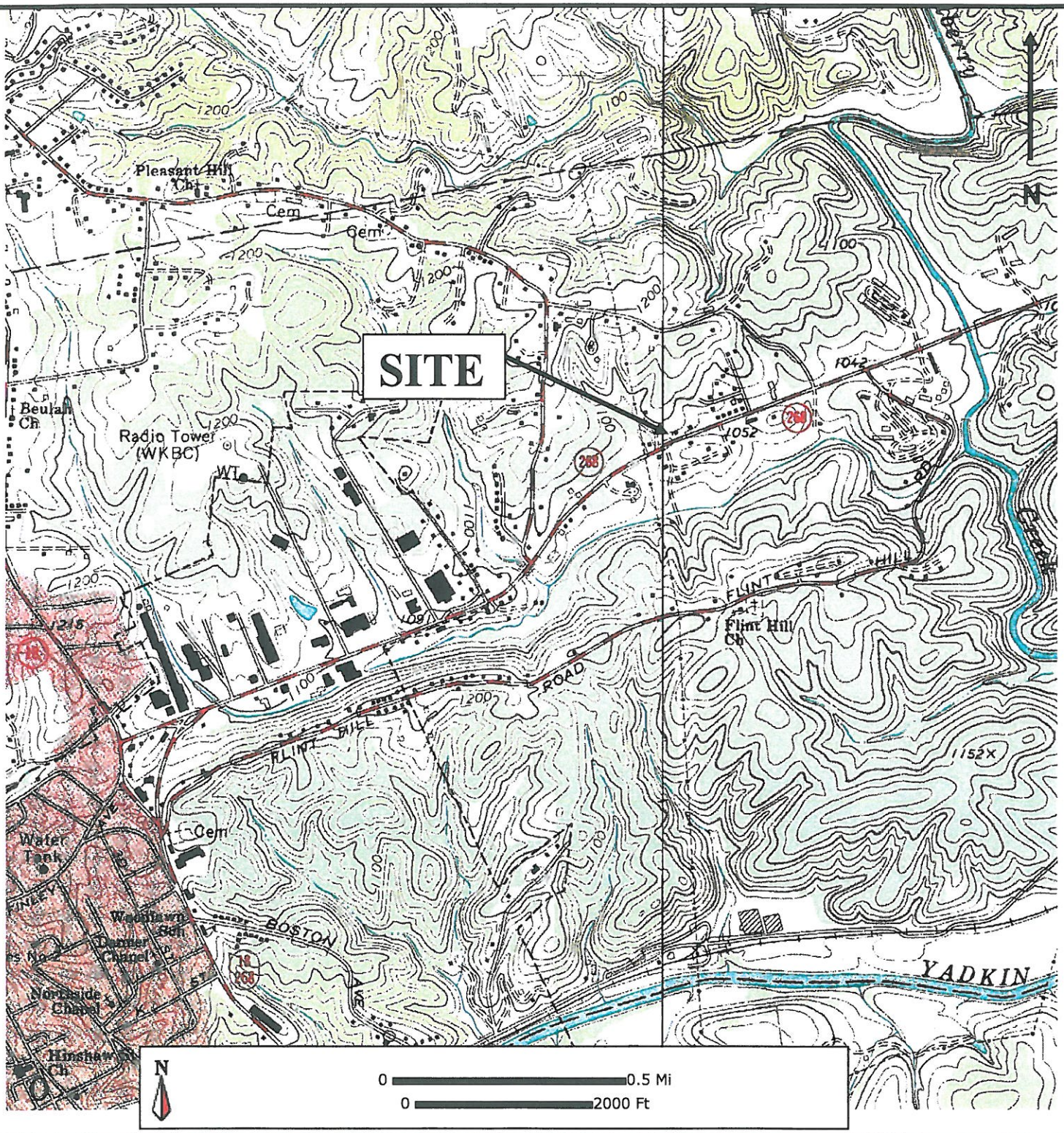
TABLE 2: SOIL SAMPLE FIELD ANALYTICAL SUMMARY

SAMPLE ID	DEPTH	COLLECTION DATE	BTEX	GRO (C5-C10)	DRO (C10-C35)	TPH (C5-C35)	Total Aromatics (C10-C35)	16 EPA PAHs	BaP
SS-1	7.0-8.0	5/30/2013	<1	<1	2.6	2.6	1.67	<0.1	<0.051
SS-2	4.0-5.0	5/30/2013	<0.6	<0.6	2.1	2.1	<0.6	<0.06	<0.03
SS-3	7.0-8.0	5/30/2013	<1	<1	<1	<1	<1.04	<0.1	<0.052
SS-4	4.0-5.0	5/30/2013	<1.1	<1.1	2.9	2.9	<1.09	<0.11	<0.055
State Action Level (Petroleum UST)			NA	10	10	NA	NA	NA	NA

Notes:

Results presented in milligrams per kilogram, analogous to parts per million
BTEX = Benzene, Toluene, Ethylbenzene, and xylenes
GRO = Gasoline Range Organics
DRO = Diesel Range Organics
TPH = Total Petroleum Hydrocarbons
PAH = Polycyclic Aromatic Hydrocarbons
BaP = Benzo(a)pyrene
Bold denotes concentration exceeds the State Action Level for Petroleum USTs

FIGURES



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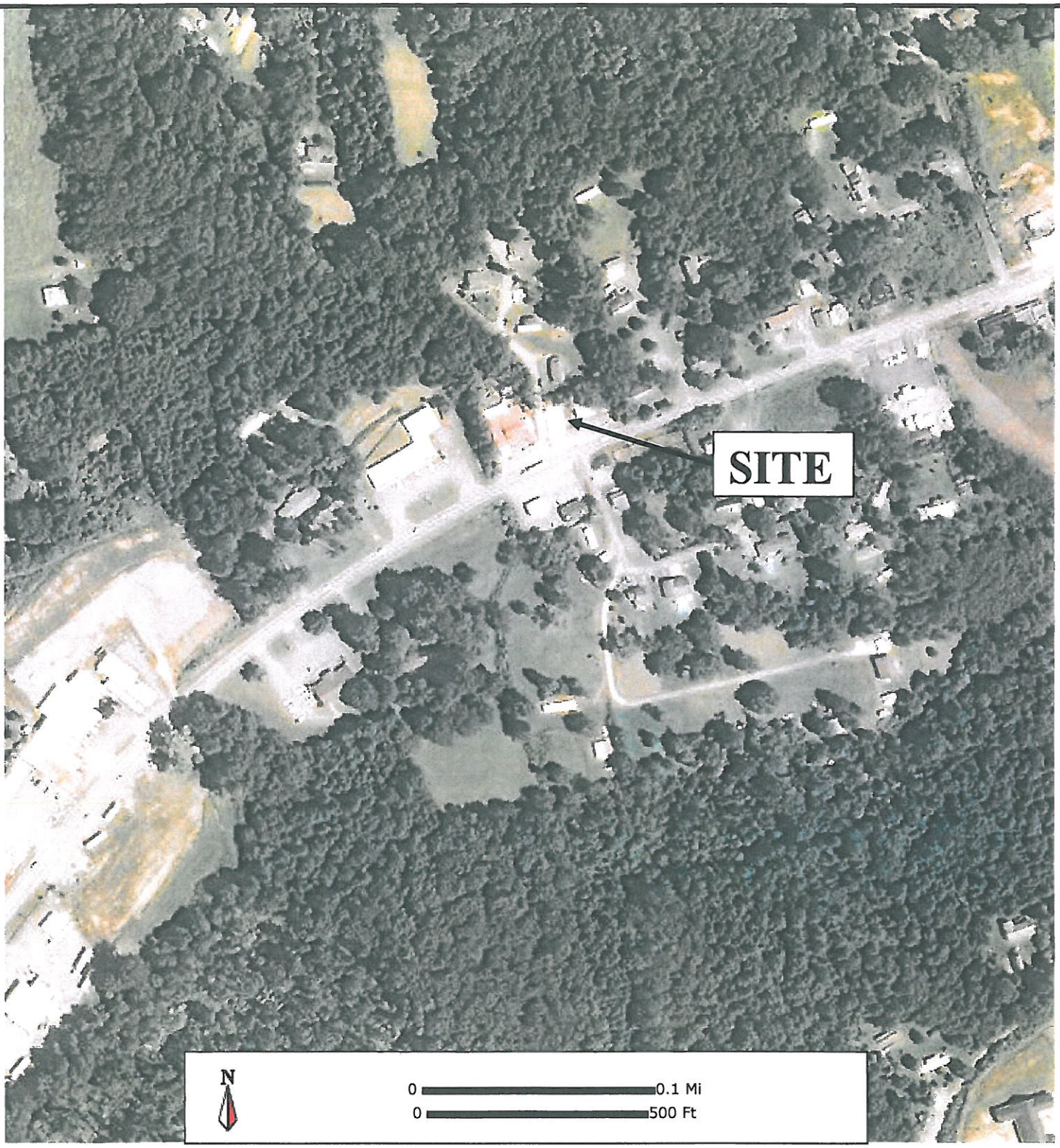
6200 HARRIS TECHNOLOGY BOULEVARD
CHARLOTTE, NORTH CAROLINA
PHONE: 704.598.1049

FIGURE 1
SITE LOCATION MAP

PARCEL 60 VERNON WYATT
HOLLAND'S USED CARS
703 ELKIN HIGHWAY
WILKESBORO, NORTH CAROLINA

DATE: 6/4/2013	APPROVED BY: CDN	SCALE: As Shown
SOURCE: USGS Topographic Orthophoto Map, Wilkesboro, NC 1966		PROJECT NO: 134245



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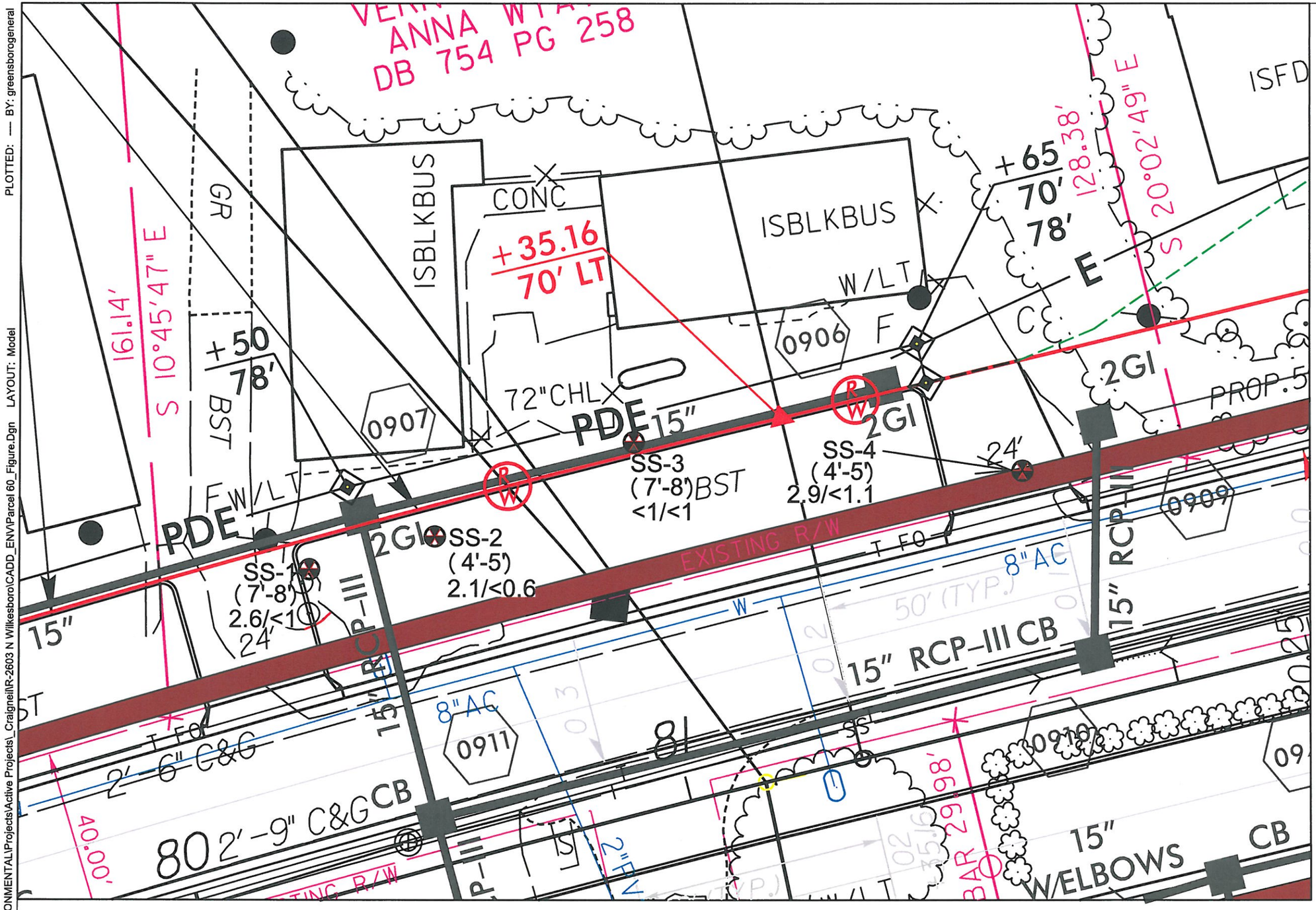
CHARLOTTE, NORTH CAROLINA
PHONE: 704.598.1049

FIGURE 2
SITE MAP

PARCEL 60 VERNON WYATT
HOLLAND'S USED CARS
703 ELKIN HIGHWAY
WILKESBORO, NORTH CAROLINA

DATE: 6/4/2013	APPROVED BY: CDN	SCALE: As Shown
SOURCE: MyTopo.com		PROJECT NO. 134245



N

LEGEND

- Existing Right of Way
- Proposed Right of Way
- E — Proposed Construction Easement
- C — Proposed Cut Line
- T — Proposed Transition Line
- F — Proposed Fill Line
- W — Existing Utilities Water UG Line SUE
- TC — Existing Utilities Telephone UG Line SUE
- SS — Exist Utilities Sanitary Sewer UG Line
- P — Exist Utilities Power UG Cable SUE
- Approximate Boring Location
- (7'-8') Sample Depth location
- <2.6/<1 Concentration of TPH-DRO/TPH-GRO mg/kg (QROS-QED data)

0 20 40
SCALE: 1" = SCALE IN FEET

KLEINFELDER
Bright People. Right Solutions.
313 GALLIMORE DAIRY ROAD
GREENSBORO, NC 27409
www.kleinfelder.com PH:336-668-0093 FAX: 336-668-3868

PROJECT NO.	134245
DRAWN BY	WJF
CHECKED BY	TO
DATE:	6/6/13

BORING LOCATION MAP
PARCEL 60

NC DEPARTMENT OF TRANSPORATION
TIP#: R-2603
WILKESBORO, NORTH CAROLINA

Figure
3

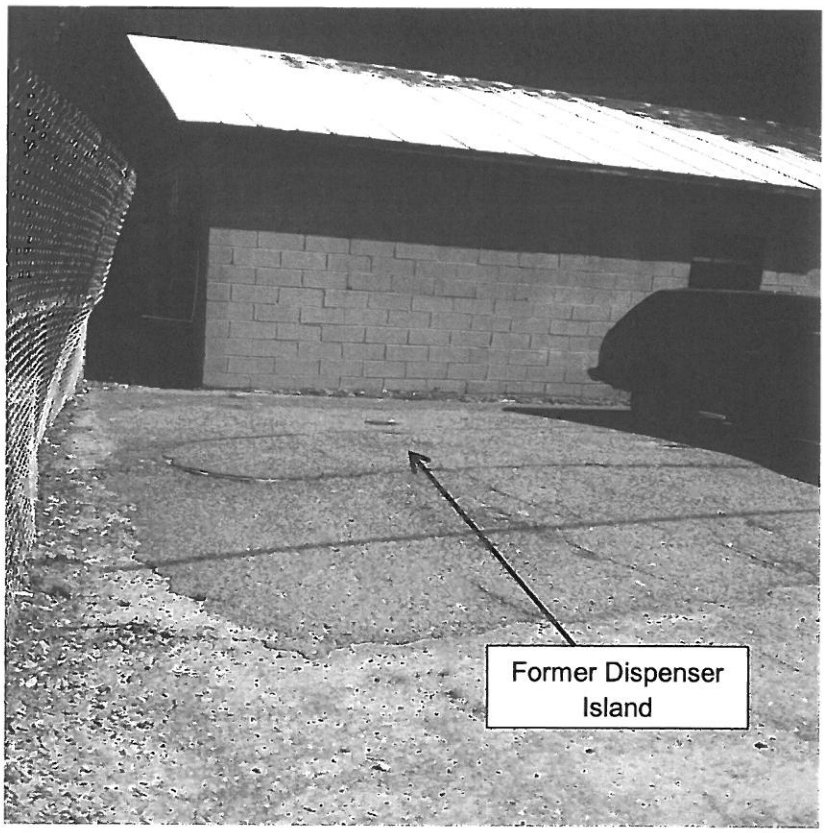
APPENDIX A

SITE PHOTOGRAPHS
KLEINFELDER PROJECT NO. 134245
PARCEL NO. 60

Photograph 1 – View of the used tire sales located on the western portion of the property.

Photograph 2 – View of the automotive repair shop located on the eastern portion of the site.

SITE PHOTOGRAPHS
KLEINFELDER PROJECT NO. 134245
PARCEL NO. 60



Photograph 3 – View of what appears to be a former dispenser island located at the southwestern corner of the automotive repair shop.

APPENDIX B

Pyramid Project # 2013-124

GEOPHYSICAL INVESTIGATION REPORT

EM61 & GPR SURVEYS

KLEINFELDER – NCDOT ROW GEOPHYSICAL SURVEY
PARCEL 60 – NC HWY 268
Wilkes County, North Carolina

June 7, 2013

Report prepared for: **Travis O'Quinn**
Kleinfelder
6200 Harris Technology Blvd.
Charlotte, NC 28269

Prepared by: _____

Eric C. Cross, P.G.
NC License #2181

Reviewed by: _____

Douglas A. Canavello, P.G.
NC License #1066

PYRAMID ENVIRONMENTAL & ENGINEERING, P.C.
P.O. Box 16265
GREENSBORO, NC 27416-0265
(336) 335-3174

NC Board for Licensing of Geologists C-257
NC Board of Examiners for Engineers & Surveyors C-1251

GEOPHYSICAL INVESTIGATION REPORT
KLEINFELDER – NCDOT ROW GEOPHYSICAL SURVEY
PARCEL 60 – NC HWY 268
Wilkes County, North Carolina

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FIGURES

1.0 INTRODUCTION

Pyramid Environmental conducted a geophysical investigation for Kleinfelder as part of the North Carolina Department of Transportation's (NCDOT) proposed right-of way (ROW) and easement areas for Parcel 60, NC Hwy. 268, North Wilkesboro, NC. The survey area extended across the entire south property boundary along NC 268, spanning a distance of approximately 180 feet from east to west. The geophysical survey area extended approximately 30 feet from the roadway north into the property. Conducted on May 20, 2013, the geophysical investigation was performed to determine if unknown, metallic underground storage tanks (USTs) were present beneath the proposed ROW/easement areas of the site.

The site was relatively open, and consisted primarily of an asphalt parking lot. Aerial photographs showing the survey area boundaries and ground-level photographs are shown in **Figure 1**.

2.0 FIELD METHODOLOGY

Prior to conducting the geophysical investigation, a 20-foot by 10-foot survey grid was established across the geophysical survey area using measuring tapes and water-based marking paint. These grid marks were used as X-Y coordinates for location control when collecting the geophysical data and establishing base maps for the geophysical results.

The geophysical investigation consisted of an electromagnetic (EM) induction-metal detection survey. The EM survey was performed on May 20, 2013, using a Geonics EM6 metal detection instrument. According to the instrument specifications, the EM61 can detect a metal drum down to a maximum depth of approximately 8 feet. Smaller objects (1-foot or less in size) can be detected to a maximum depth of 4 to 5 feet. All of the EM61 data were digitally collected at approximately 0.8 foot intervals along north-south trending (west survey area) or east-west trending (north/east survey area), parallel survey lines spaced five feet apart. All of the data were downloaded to a computer and

reviewed in the field and office using the Geonics DAT61 and Surfer for Windows Version 7.0 software programs.

All EM anomalies recorded could be attributed to visible cultural features at the ground surface. For this reason, a GPR survey was not necessary, and GPR data were not acquired.

3.0 DISCUSSION OF RESULTS

Contour plots of the EM61 bottom coil and differential results obtained across the proposed ROW/easement areas at the property are presented in **Figure 2**. The bottom coil results represent the most sensitive component of the EM61 instrument and detect metal objects regardless of size. The bottom coil response can be used to delineate metal conduits or utility lines, small, isolated metal objects, and areas containing insignificant metal debris. The differential results are obtained from the difference between the top and bottom coils of the EM61 instrument. The differential results focus on the larger metal objects such as drum and UST-size objects and ignore the smaller insignificant metal objects.

Discussion of EM anomalies: The EM anomaly at X=45, Y=25 was the result of a metal water meter cover. The EM anomaly at X=40, between Y=30 and Y=45 was the result of a metal signs. The EM anomaly at X=80, Y=50 was the result of a vehicle and/or a metal fence at this location. The EM anomaly at X=180, Y=50 was the result of a vehicle.

The geophysical investigation suggests that the area of the proposed ROW/easement at Parcel 60 in North Wilkesboro, NC, does not contain metallic USTs.

4.0 SUMMARY & CONCLUSIONS

Our evaluation of the EM61 data collected across the proposed ROW/easement area at Parcel 60, North Wilkesboro, North Carolina provides the following summary and conclusions:

- The EM61 survey provided reliable results for the detection of metallic USTs within the geophysical survey area.

- All of the EM anomalies across the contour map were attributed to visible objects at the ground surface, therefore, a GPR survey was not necessary or performed.

- The geophysical investigation suggests that the area of the proposed ROW/easement at Parcel 60 in North Wilkesboro, NC, does not contain metallic USTs.

5.0 LIMITATIONS

Geophysical surveys have been performed and this report prepared for Kleinfelder in accordance with generally accepted guidelines for EM61 and GPR surveys. It is generally recognized that the results of the EM61 and GPR surveys are non-unique and may not represent actual subsurface conditions. The EM61 results obtained for this project have not conclusively determined that metallic USTs do not lie within the proposed ROW/easement area of the Wilkes County property, but that none were detected. Additionally, it should be understood that areas containing vehicles or other restrictions to the accessibility of the geophysical instruments could not be investigated.

FIGURES

Aerial Photograph Showing Approximate Geophysical Survey Boundaries

View of Auto Shop Building
(Photograph Facing Approximately North)

View of Geophysical Survey Area
(Photograph Facing Approximately West)

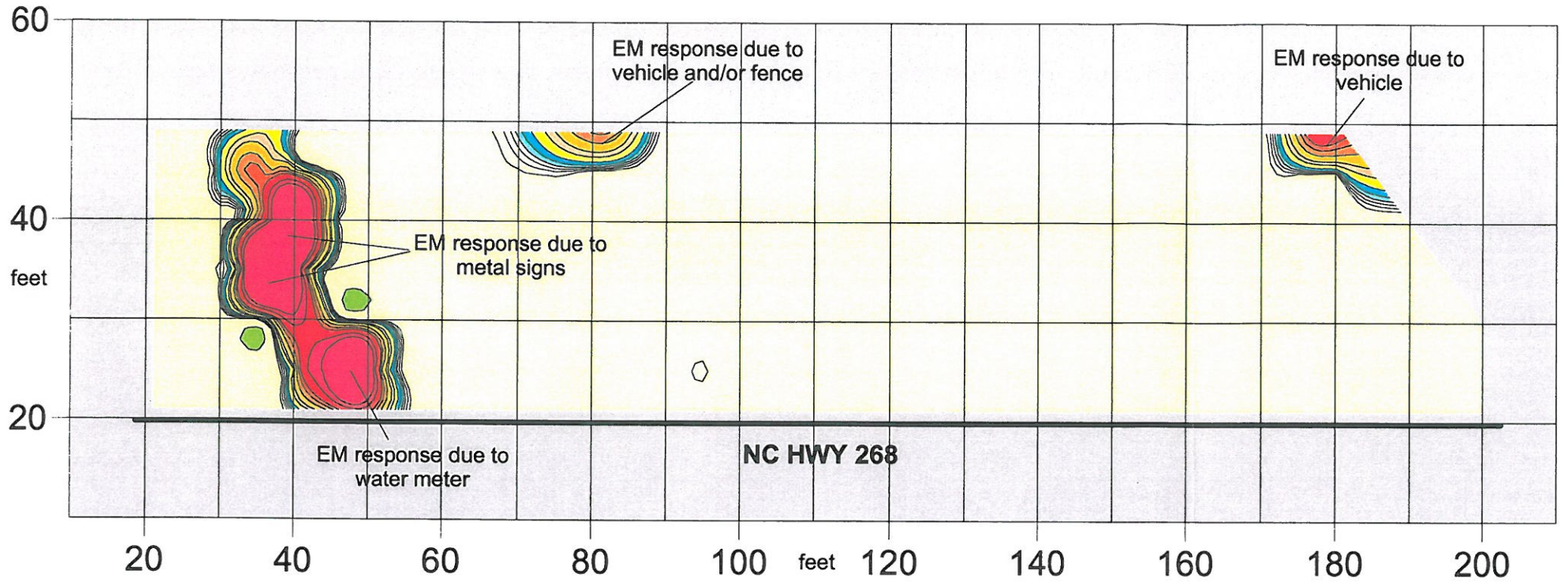
PYRAMID
ENVIRONMENTAL & ENGINEERING, P.C.

CLIENT	KLEINFELDER	DATE	05/16/13	DRWN	ECC
SITE	PARCEL 60, WILKES COUNTY (NCDOT ROW PROJECT)	LAY		CHKD	
CITY	NORTH WILKESBORO	STATE	NORTH CAROLINA	DWG	
TITLE	GEOPHYSICAL RESULTS	J.NO.	2013-131	FIGURE	

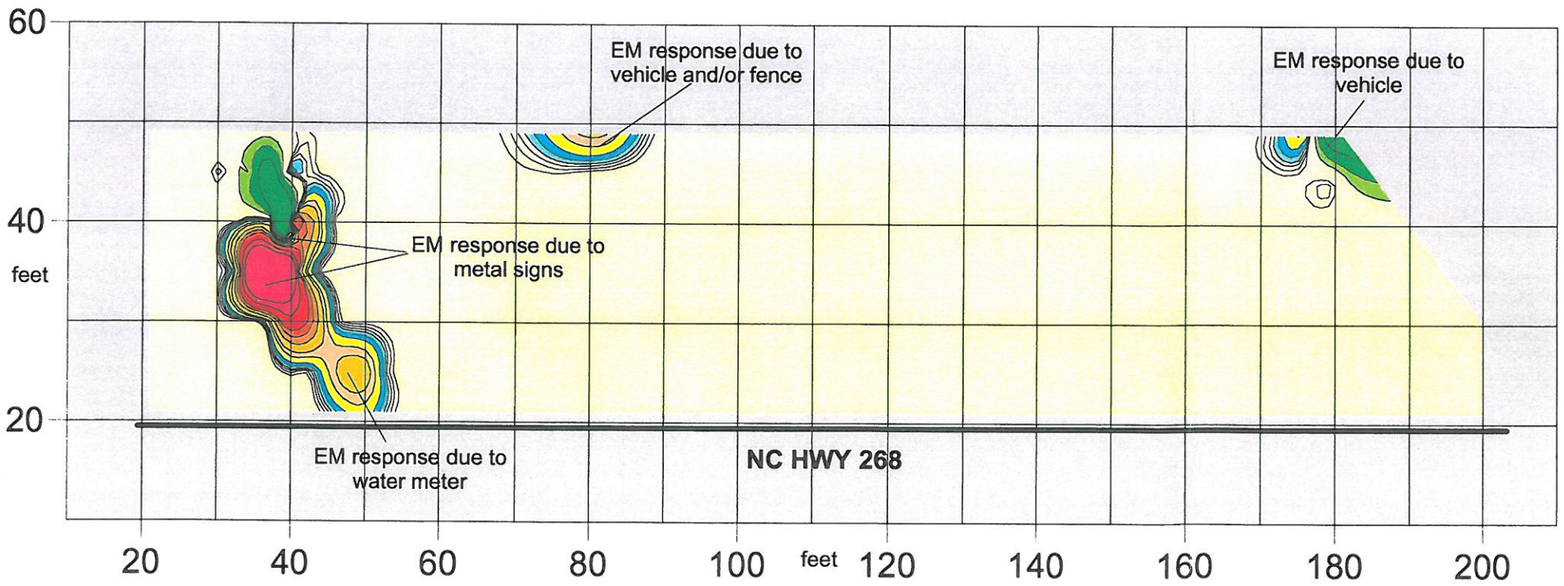
SURVEY BOUNDARIES & SITE PHOTOGRAPHS

FIGURE 1

EM61 Bottom Coil Results



EM61 Differential Results



NO EVIDENCE OF METALLIC USTs OBSERVED

The contour plots show the bottom coil (most sensitive) and differential results of the EM61 instrument in millivolts (mV). The bottom coil response shows buried metallic objects regardless of size. The differential response focuses on larger, buried metallic objects such as drums and USTs and ignores smaller miscellaneous buried, metal debris.The EM61 data were collected on May 16, 2013 using a Geonics EM61 instrument. Ground penetrating radar (GPR) data were not collected due to no unexplained anomalies in the EM survey.

EM61 Metal Detection Response (millivolts)

N

TITLE
PARCEL 60 - EM61 BOTTOM COIL & DIFFERENTIAL RESULTS CONTOUR MAP

PROJECT
NC DEPARTMENT OF TRANSPORTATION
ROW IMPROVEMENT PROJECT
NORTH WILKESBORO, WILKES COUNTY, NC

PYRAMID ENVIRONMENTAL & ENGINEERING, P.C.
503 INDUSTRIAL AVENUE
GREENSBORO, NC 27460
(336) 335-3174 (p) (336) 691-0648 (f)
License # C1251 Eng. / License # C257 Geology

DATE	CLIENT
06/05/2013	KLEINFELDER
PYRAMID PROJECT #: 2013-124	**FIGURE 2**

APPENDIX C

Date Begin - End:	5/30/2013	**Drill Company:**	Probe Technology
Logged By:	Peter Pozzo	**Drill Crew:**	John Allen
Hor.-Vert. Datum:	Not Available	**Drill Equipment:**	6610DT Geoprobe
Angle from Vert.:	0 degrees	**Exploration Method:**	Geoprobe
Weather:	Sunny 70's	**Auger Diameter:**	2.25 in. O.D.

BORING LOG P60_SS-1

FIELD EXPLORATION

No Coordinates Available
No Elevation Available

Depth (feet)	Sample Type	Sample Number	Recovery (NR=No Recovery)	blows/6 in.	PID / FID (ppmv)	Graphical Log
0					2.5	
5					3.5	
		SS-1			6.1	
10					5.3	

SILT with Clay and Sand: reddish tan, dry, Fill Material

The exploration was terminated at approximately 10 ft. below ground surface

GROUNDWATER LEVEL INFORMATION:
Groundwater was not encountered during drilling or after completion.
GENERAL NOTES:

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PROJECT NO.:	134245
DRAWN BY:	WJF
CHECKED BY:	PFP
DATE:	
REVISED:	

BORING LOG P60_SS-1

Parcel 60 - Vernon Wyatt
Holland's Used Cars
703 Elkin Highway
Wilkesboro, NC

PLATE 1

PAGE: 1 of 1

Date Begin - End:	5/30/2013	**Drill Company:**	Probe Technology
Logged By:	Peter Pozzo	**Drill Crew:**	John Allen
Hor.-Vert. Datum:	Not Available	**Drill Equipment:**	6610DT Geoprobe
Angle from Vert.:	0 degrees	**Exploration Method:**	Geoprobe
Weather:	Sunny 70's	**Auger Diameter:**	2.25 in. O.D.

BORING LOG P60_SS-2

FIELD EXPLORATION

No Coordinates Available
No Elevation Available

Depth (feet)	Sample Type	Sample Number	Recovery (NR=No Recovery)	blows/6 in.	PID / FID (ppmv)	Graphical Log
0					5.7	
5		SS-2			6.2	
					2.0	
10					4.7	

SILT with Clay and Sand: reddish tan, dry

The exploration was terminated at approximately 10 ft. below ground surface

GROUNDWATER LEVEL INFORMATION:
Groundwater was not encountered during drilling or after completion.
GENERAL NOTES:

15
20
25
30

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PROJECT NO.:	134245
DRAWN BY:	WJF
CHECKED BY:	PFP
DATE:	
REVISED:	

BORING LOG P60_SS-2

Parcel 60 - Vernon Wyatt
Holland's Used Cars
703 Elkin Highway
Wilkesboro, NC

PLATE 2

PAGE: 1 of 1

gINT FILE: W:\share_environmental\projects\active Projects\134245_ncdot_wilkesboro\134245.gpj R:KLF_STANDARD_GINT_LIBRARY_SR.1.1.GLB [KLF_ENVIRONMENTAL LOG]

Date Begin - End:	5/30/2013	**Drill Company:**	Probe Technology
Logged By:	Peter Pozzo	**Drill Crew:**	John Allen
Hor.-Vert. Datum:	Not Available	**Drill Equipment:**	6610DT Geoprobe
Angle from Vert.:	0 degrees	**Exploration Method:**	Geoprobe
Weather:	Sunny 70's	**Auger Diameter:**	2.25 in. O.D.

BORING LOG P60_SS-3

FIELD EXPLORATION

No Coordinates Available
No Elevation Available

Depth (feet)	Sample Type	Sample Number	Recovery (NR=No Recovery)	blows/6 in.	PID / FID (ppmv)	Graphical Log	
0							**SILT with Clay and Sand**: reddish tan, dry, Fill Material
					3.3		
5					4.9		
		SS-3			5.2		
10					4.6		

The exploration was terminated at approximately 10 ft. below ground surface

GROUNDWATER LEVEL INFORMATION:
Groundwater was not encountered during drilling or after completion.
GENERAL NOTES:

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PROJECT NO.:	134245
DRAWN BY:	WJF
CHECKED BY:	PFP
DATE:	
REVISED:	

BORING LOG P60_SS-3

Parcel 60 - Vernon Wyatt
Holland's Used Cars
703 Elkin Highway
Wilkesboro, NC

PLATE 3

PAGE: 1 of 1

Date Begin - End:	5/30/2013	**Drill Company:**	Probe Technology
Logged By:	Peter Pozzo	**Drill Crew:**	John Allen
Hor.-Vert. Datum:	Not Available	**Drill Equipment:**	6610DT Geoprobe
Angle from Vert.:	0 degrees	**Exploration Method:**	Geoprobe
Weather:	Sunny 70's	**Auger Diameter:**	2.25 in. O.D.

BORING LOG P60_SS-4

FIELD EXPLORATION

Depth (feet)	Sample Type	Sample Number	Recovery (NR=No Recovery)	blows/6 in.	PID / FID (ppmv)	Graphical Log	No Coordinates Available No Elevation Available
0					4.3		**SILT with Clay, Sand and Pebbles**: red, dry, Fill Material
5					5.8		**SILT with Clay and Sand**: red, dry, Fill Material
					2.9		
10					1.7		

The exploration was terminated at approximately 10 ft. below ground surface

GROUNDWATER LEVEL INFORMATION:
Groundwater was not encountered during drilling or after completion.
GENERAL NOTES:

15
20
25
30

KLEINFELDER
Bright People. Right Solutions.

PROJECT NO.:	134245
DRAWN BY:	WJF
CHECKED BY:	PFP
DATE:	
REVISED:	

BORING LOG P60_SS-4

Parcel 60 - Vernon Wyatt
Holland's Used Cars
703 Elkin Highway
Wilkesboro, NC

PLATE 4

PAGE: 1 of 1

gINT FILE: W:\share_environmental\projects\active Projects\134245_ncdot_wilkesboro\134245.gpj R:KLF_STANDARD_GINT_LIBRARY_SR.1.1.GLB [KLF_ENVIRONMENTAL LOG]

APPENDIX D

QED

AQROS

Hydrocarbon Analysis Results

Client: NCDOT
Address: Wilkesboro, NC

Samples taken Thursday, May 30, 2013
Samples extracted Thursday, May 30, 2013
Samples analysed Thursday, May 30, 2013

Contact: Craig Neil

Operator Traivs O'Quinn

Project: Parcel 60

Matrix	Sample ID	Dilution used	BTEX (C6 - C9)	GRO (C5 - C10)	DRO (C10 - C35)	TPH (C5 - C35)	Total Aromatics (C10-C35)	16 EPA PAHs	BaP	Ratios			HC Fingerprint Match
										% light	% mid	% heavy	
s	P60 SS-1 7-8'	20.5	<1	<1	2.6	2.6	1.67	< 0.1	< 0.051	50.5	42.4	7.1	V.Deg.PHC 97.2%
s	P60 SS-2 4-5"	12.1	<0.6	<0.6	2.1	2.1	< 0.6	< 0.06	< 0.03	0	68.5	31.5	Degraded Fuel (est) 86.6%
s	P60 SS-3 7-8'	20.8	<1	<1	<1	<1	< 1.04	< 0.1	< 0.052	0	100	0	Match not possible
s	P60 SS-4 4-5'	21.8	<1.1	<1.1	2.9	2.9	< 1.09	< 0.11	< 0.055	0	91.8	8.2	V.Deg Fuel (est) (PFM)

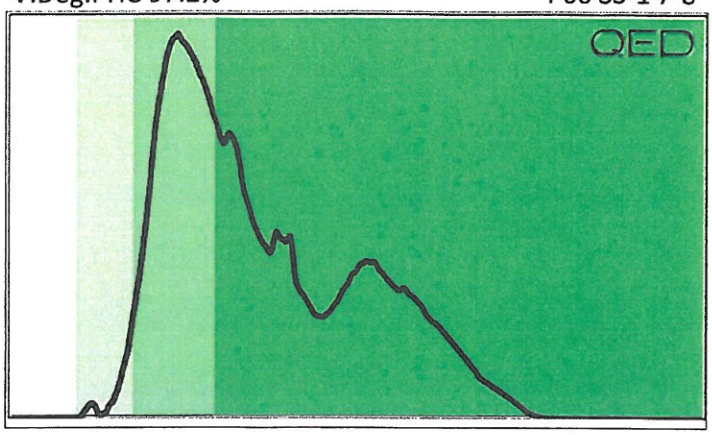
Initial Calibrator QC check Screening Low Range Calibrator Final check
High Range Calibrator Final check

Results generated by a QED HC-1 analyser
Concentration values in mg/kg for soil samples and mg/L for water samples.
Soil values are not corrected for moisture or stone content

Fingerprints provide a tentative hydrocarbon identification based on operator selected library matches
Fingerprint match abbreviations Est = Specific calibrator not used, result estimated (PFM)= Poor library fingerprint match
(SBS)= site specific background subracted (LBS)= Library background subtracted % = match confidence

Project Parcel 60 **Date** Thursday, May 30, 2013

V.Deg.PHC 97.2% P60 SS-1 7-8'



Degraded Fuel (est) 86.6% P60 SS-2 4-5''

Match not possible P60 SS-3 7-8'

V.Deg Fuel (est) (PFM) P60 SS-4 4-5'